(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 30 June 2005 (30.06.2005)

PCT

(10) International Publication Number WO 2005/059578 A3

(51) International Patent Classification⁷: G01F 11/36

(21) International Application Number:

PCT/GB2004/005014

(22) International Filing Date:

29 November 2004 (29.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0329516.9

19 December 2003 (19.12.2003) GB

- (71) Applicant (for all designated States except US): UNIVER-SITY OF KENT [GB/GB]; The Registry, University of Kent, Canterbury, Kent CT2 7NZ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MCDON-ALD-MAIER, Klaus, Dieter [DE/GB]; 80 Gladstone Road, Deal, Kent CT14 7ET (GB). HOPKINS, Andrew, Brian, Thomas [GB/GB]; Crossings Field, Woodland Road, Lyming, Folkestone, Kent CT18 8ET (GB).
- (74) Agent: ELKINGTON AND FIFE LLP; Prospect House, 8 Pembroke Road, Sevenoaks, Kent TN13 1XR (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

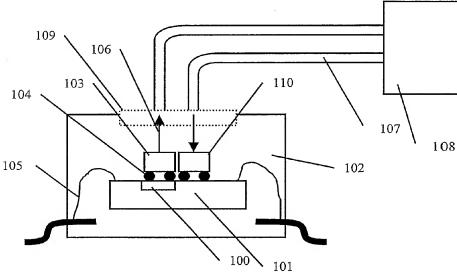
Published:

ZW.

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 11 May 2006

[Continued on next page]

(54) Title: INTEGRATED CIRCUIT WITH DEBUG SUPPORT INTERFACE



(57) Abstract: A high speed debug support interface has circuits to interface on-chip debug support circuits to a high bandwidth communications port means located on the surface of a system integrated circuit (101) and to on-chip debug support circuits (100). The communication port means can be realised by bonding or integrating special sender and or receiver cells preferably optical sender cells (103) and or optical receiver cells (110) onto the surface of the system integrated circuit (101). The high speed debug support interface communicates. with on-chip or in-assembly debug support circuits and an external development tool (108) to permit hardware and software related debugging and development activities, including program tracing, data tracing and memory substitution. The high speed debug support interface has circuits to interface on-chip debug support circuits to system resources such as memory located within, the device assembly (102) and connected by the system interconnect.





For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.